

## Exercise 2

02 September 2022 16:58

1. Examine the python script populateContainer.py script (in populate\_containers directory). It loads some web traffic data from Azure blob store into your Cosmos DB database container called WebsiteData
2. Run the populateContainer.py script (in populate\_containers directory) to populate your collection.  
Use F5 from inside Visual Studio Code or  
python populate\_containers/populateContainer.py  
from the command line (after you have activated your new environment!)
3. In the Azure Portal query the data  
In your browser navigate to <https://portal.azure.com>  
Authenticate as necessary  
Find the Azure Cosmos DB Account we created earlier  
Open up the up the Data Explorer tab from the left menu  
Find your Database (the name you gave it in your .cosmosDBConfig.json file)  
Find the WebSiteData container and expand it  
Click the Items heading and click on one or two of the id's to view the documents

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NOTEBOOKS

Notebooks is currently not available. We are working on it.

SELECT \* FROM c

Edit Filter

id	/CartID
cc103dc7-a624-49...	4441
12fca313-4c8c-480...	8744
c46bc30d-304c-47...	6405
babb4147-8e6f-49...	6405
526d2d25-a087-4c...	2924
00ffd39c-7e98-445...	5399
5ee27756-c380-40...	1769
2698732c-1dc2-4e...	1769
329fd227-21af-441...	7078
f0e2bfd3-ac9e-4e1...	2542
20c388ee-b4bb-4d...	7235
d456f0ef-20b7-499...	7235
fe1a81cd-7dfb-4e0...	7235
8e686671-7823-49...	4379
c8c93389-4858-4f9...	4379
eacc39a4-515d-4cb...	2790
f3752c83-c3de-4b4...	2790
24101c71-774f-4a0...	2700

```
1 {
2   "CartID": 2542,
3   "Action": "Viewed",
4   "Item": "Flip Flop Shoes",
5   "Price": 14,
6   "UserName": "Vernon.Wiza40",
7   "Country": "Cape Verde",
8   "EventDate": "2014-07-09T00:00:00",
9   "Year": 2014,
10  "Latitude": -63.1477,
11  "Longitude": 172.1088,
12  "Address": "0844 Goldner Drive, Willfort, Cape Verde",
13  "id": "f0e2bfd3-ac9e-4e1b-96fb-99ee33abef88",
14  "_rid": "WzN2ALeCHhYKAAAAA==",
15  "_self": "dbs/WzN2AA==/colls/WzN2ALeCHhYKAAAAA==/",
16  "_etag": "\"4f00d2e0-0000-0c00-0000-63108f740000\"",
17  "_attachments": "attachments/",
18  "_ts": 1662029684
19 }
```

4. Click on the New SQL Query Icon to open a new SQL Query window

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New SQL Query

SELECT \* FROM c

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00ffd39c-7e98-445...	5399
5ee27756-c380-40...	1769
2698732c-1dc2-4e...	1769
329fd227-21af-441...	7078
f0e2bfd3-ac9e-4e1...	2542
20c388ee-b4bb-4d...	7235
d456f0ef-20b7-499...	7235
fe1a81cd-7dfb-4e0...	7235
8e686671-7823-49...	4379
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eacc39a4-515d-4cb...	2790
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24101c71-774f-4a0...	2700

```
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2   "CartID": 2542,
3   "Action": "Viewed",
4   "Item": "Flip Flop",
5   "Price": 14,
6   "UserName": "Vernon.I",
7   "Country": "Cape Ver
```

5. In the new query pane the following SQL Statement will appear  
SELECT \* FROM c

This will return all of the documents in the collection as they are stored in the Database. Select

Execute Query to run the query.

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The screenshot shows the Azure Data Explorer interface. On the left is a sidebar with navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Quick start, Notifications, and Data Explorer. The main area is divided into three panes. The top pane shows the SQL API with a query editor containing the text 'SELECT \* FROM c'. The middle pane shows the 'Results' tab with a list of documents. The bottom pane shows the 'Query Stats' tab. The 'Results' tab displays two JSON documents. The first document has a 'CartID' of 4441, an 'Action' of 'Viewed', an 'Item' of 'Black Tee', a 'Price' of 9, a 'Username' of 'Xavier.Conn20', a 'Country' of 'Tunisia', an 'EventDate' of '2014-02-14T00:00:00', a 'Year' of 2014, a 'Latitude' of -54.9221, a 'Longitude' of 51.0792, an 'Address' of '964 Isabel Station, Trantowland, Tunisia', an 'Id' of 'ccl03dc7-a624-49bf-8b07-6b6077bd839e', an '\_rid' of 'NzN2ALeCHhYBAAAAAAAAAA==', a '\_self' of 'dbs/NzN2AA==/colls/NzN2ALeCHhY=/docs/NzN2ALeCHhYBAAAAAAAAAA==/', an '\_etag' of '"/4f0095e0-0000-0c00-0000-63108f740000"', an '\_attachments' of 'attachments/', and a '\_ts' of 1662029684. The second document has a 'CartID' of 8744, an 'Action' of 'Viewed', an 'Item' of 'Flannel Shirt', a 'Price' of 19.99, and a 'Username' of 'Jadyn Lubowitz62'.

6. Type in the following query to count all of the documents in the collection

```
SELECT COUNT(1)
```

```
FROM c
```

Select Execute and check the number of documents matches that returned by the populateContainer.py script you ran earlier

7. Write the SQL query to count the number of documents that have the property "Action" set to "Purchased"

Execute the query and record the number of purchases in the WebSiteData documents

This link may be of help :-

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql/tutorial-query-sql-api>

8. Work out how to calculate the total price of all of the sales detailed in the WebSiteData documents

See <https://docs.microsoft.com/en-us/azure/cosmos-db/sql/sql-query-aggregate-functions>

for some help.